Where did they go? *

By

Anders Frederiksen
Department of Economics, Aarhus School of Business, Fuglesangs Allé 4,8210 Aarhus V, Denmark,
Centre for Labour Market and Social Research and IZA
Phone: +45 89486409, Fax: +45 86155175, E-mail: afr@asb.dk

and

Niels Westergaard-Nielsen
Department of Economics, Aarhus School of Business, Fuglesangs Allé 4,8210 Aarhus V, Denmark,
Centre for Labour Market and Social Research and IZA
Phone: +45 89486407, Fax: +45 86155175, E-mail: nwn@asb.dk

Abstract:
We study individual job-separations and their associated destination states for all individuals in the private sector in Denmark for the period 1980 to 1995 and account for the cyclical flows. We find that individual and workplace characteristics as well as business cycle effects are important in explaining the individual behaviour. In policy simulations we look at the impact on individual transitions. We find that structural and growth policies have different implications for the economy. Policy interventions with the purpose of preventing firm closures are argued to be inefficient.

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1. Introduction

In recent years, several studies have described job and worker flows for various countries based on matched employer-employee data. See, for instance, Davis and Haltiwanger (1992) for the U.S., Hamermesh et al. (1996) for the Netherlands, Abowd et al. (1996) for France and Albæk and Sørensen (1998) for Denmark. These studies document how individual establishments adjust their workforce in response to the multitude of shocks they are exposed to, and go on to develop the implications of this micro-level adjustment process for aggregate, macro-level quantities such as total job creation and total job destruction in an economy. The findings of this largely data-driven research have produced "stylized facts" about such features of job and worker flows as their magnitude, persistence, cyclicality, and distribution between individual establishments.

The main finding in these studies is that large proportions of the labour force leave their jobs every year. Similarly, each year a large proportion of jobs are filled with new employees. Implicitly, it is assumed that people leave their jobs due to external shocks to their firms. It is also assumed that most of these persons are looking for other jobs. The main flows cover, however, a number of different flows with different destinations, where it is less obvious that business cycle shocks are the determining factor. Some of the flows are probably determined by external factors such as retirement. There is, however, little knowledge about the nature of these flows.

In this paper we account for the cyclicality of the flows taking place after a job separation from the private sector. The flows will be decomposed by destination states where the main groups are unemployment, new employment and out of the labour force as in Blanchard and Diamond (1990). We differentiate the destination states further by decomposing the employment state into self-employment, employment in the public sector or new employment in the private sector and the non-employment state is decomposed into education, pension etc.

Furthermore, we study the importance of individual and firm characteristics as well as the influence of the business cycle on the probability of ending up in a particular destination state. This approach was motivated by the analysis in Anderson and Meyer (1994). We find large heterogeneity both within and between destination states as well as over the business cycle and that a large fraction of all separations end in unemployment.

In a policy section we simulate the impact of a growth policy and a structural policy, which is changing the incentives of the individuals by lowering the level of unemployment benefits. The two policies are shown to have different implications for the economy but both reduce the transitions into unemployment. In this section we also question the importance of policies targeting closing firms because the empirical findings indicate that individuals separating

from a closing firm do much better in the labour market than individuals separating for other reasons.

We make use of a unique data set drawn from the register-based Integrated Database for Labour Market Research (IDA) created by Statistics Denmark and containing information on *all* employees of *all* establishments in *all* sectors. Our data run from 1980 to 1995 and span almost two full business cycles.[1]

The next section briefly describes the data used; section 3 contains results regarding the magnitude of different job and worker flows; section 4 looks at the cyclicality of flows, section 5 looks at the individual determinants and section 6 discusses policy implications. Section 7 summarises and concludes.

2. Data

IDA includes register-based information on all establishments and residents in Denmark. Persons and establishments are matched at the end of November each year, and we are able to obtain a comprehensive snapshot of all establishments in Denmark and all of their employees at this point of time each year from 1980 to 1995. Both establishments and persons are assigned a unique identification number and can be followed over time.

All flows calculated in this paper are based on comparing worker and establishment matches in consecutive Novembers. Hence, employment relationships (and associated flows) that last from, say, January to April of any given year are not picked up. As such, our figures should be considered a lower bound measure of actual flows. We focus on a worker's primary end-of-November employment relationship and ignore all other employment relationships of individuals who work multiple jobs at this time.[2]

Worker and job flow concepts are defined from one year (a day in November) to the next. We can follow each worker throughout her/his employment at the sampled workplace during the period 1980-1995. A separation in time t is defined as a situation where the person is employed at a plant in time t but not employed at the same plant in time t+1 and a stayer is a person who is employed at the same plant in both periods. Similarly, a hire in time t is defined as a situation, where the person was in the workplace in t but not in t-1. The proportions of separations are calculated according to the conventional definitions and the formula for calculation can be seen in the note to Table 1.

[1] See Leth-Sørensen (1995) for further details about the IDA database.

[2] We consider for each worker the November establishment attachment from which he or she earned the most during a given year. IDA registers up to 3 attachments for each worker in each year. However, most work checking the match validity has been carried out using primary November attachments. Hence, we ignore multiple job holding. Together with the other employment relationship which we ignore, non-November attachments, these omissions on average constitute 4.8 per cent of all man-years of employment.

Table 1. Decomposition of separations in the private sector, 1980-95.

	Separations	
	In % of all employment	% of all separations
Total	**29.07**	**100**
	(1.47)	
Job to job	**20.02**	**69**
	(1.91)	
Of which		
Same firm	3.42	12
	(0.44)	
Private sector	12.75	44
	(1.76)	
Public sector	2.05	7
	(0.24)	
No physical workplace	0.74	2
	(0.23)	
Self-employed	1.06	4
	(0.10)	
Job to no job	**9.05**	**31**
	(1.16)	
Of which		
Unemployment	5.36	18
	(1.07)	
Education	0.92	3
	(0.17)	
Post employment wage	0.66	2
	(0.08)	
Pension	0.32	1
	(0.04)	
Out of labour force	1.62	6
	(0.16)	
New Labour Program	0.17	1
	(0.44)	

Note: Standard errors are in parentheses. Separations are calculated as:

$$Separations = \frac{separations(t, t+1)}{½ * (separations + hires) + stayers}$$

The new labour market program (NLP) was introduced in 1994 and accounts for 4.98% of the separations in 1994 and 3.95% in 1995. The NLP separations enter the decomposition in the same way as the other variables but are highly underrepresented since they occur for only two years.

The unique feature of the IDA database is the detailed information on individuals and characteristics of the plants where the persons work. The individual characteristics included in the analysis are the classical variables of gender, age and occupation but also the constructed

variable replacement ratio.[3] The replacement ratio reflects the compensation to which an individual is eligible when unemployed relative to the income earned in the job, which she/he left. The replacement ratio is calculated on an individual basis and depends on the labour market history and wage of the individual. The replacement ratio is 90% for low-wage rates and is reduced for pay levels above a certain maximum.[4]

In this paper we make explicit use of the plant characteristics i.e. sector and size.[5] Furthermore, we include information on changes in plant size. The indicators are constructed as a series of categories indicating if the firm is contracting, expanding or staying constant in terms of employment together with an indicator for closing workplace. These variables are interesting because the nature of the separation is believed to be an important signal when looking for a new job because it describes the job search condition.

The annual matching of the individual and the plant due to the unique identification makes it possible to associate individuals with both plant- and individual-specific characteristics on a large scale, providing a unique chance of analysing the individual factors behind the flows and of answering the question whether certain employees are more likely to move towards one destination than others.

One factor blurring the true turnover is spurious job creation and destruction resulting if firms change their formal identity in the registers from one year to the next. Statistics Denmark has corrected changes in identity in the cases where it was obvious to Statistics Denmark that a real change had not happened. The main indicator used for the correction is the fraction of the workforce remaining employed.

3. Composition of turnover

In Table 1 we have summarised annual transitions over all 15 years. The basic facts are: 29% of all employments end each year in a separation, of these two thirds (20% of all employed) end in another job. Thus, one third of all who separated is found without a job the following year. Among the latter group a little more than half (18% of all separations) are found among the unemployed in the subsequent year. One sixth (6% of all separations) is found in a flow to neither unemployment nor transfer income, but just out of the labour force, while one twelfth (3% of all separations) has started an education and only about one tenth of the non-employed is found to have left employment because of retirement. Put in a different way: Of the total number of separations, only 3% are due to retiring (Pension plus post employment wage).

[3] Groot (1990) finds that forgone earnings have a greater effect on reemployment probabilities than other factors such as unemployment and other benefits.

[4] See Andersen et al. (2001) for the rules for calculation of the replacement ratio.

[5] An obvious extension could be to include information on human capital and tenure profiles.

3.1. Discussion

First, the separation flows show that 69% of all separations go to another job, which can hardly be a surprise. More surprising is the fact that almost 20% of all separations end in unemployment. In other words, there is a substantial risk of ending up in unemployment every time a person quits a job or is laid off.

To a large extent, the flow into education covers young people, who had a job before starting their studies or who are switching between job and education. The flows into post employment wage and pension are almost absorbing in the sense that very few leave this state and continue a working career. Furthermore, the proportion of all separations that are due to this "natural" course is rather small, namely 3% of all separations. This measure does, however, not account for the flow from unemployment and out of the labour force into retirement and post employment wage.

A group of special interest is those who leave a job and subsequently are registered as out of the labour force. The annual flow into this group covers 6% of all separations. The main reason for being classified as out of the labour force is that the person is on sickness or maternity leave and is not maintaining a formal job relationship. But there can of course be other reasons for being observed in this state.

The new labour market program, NLP, has its own category. NLP was introduced in 1994 and became very popular. So popular that almost 1.5% of the entire labour force took part each of the first years. In the beginning, NLP mainly covered a leave scheme for employed and unemployed. To a certain degree, participation was an alternative to unemployment. The return flow into employment was small which was probably due to the recent introduction of NLP together with a duration of NLP-schemes of more than half a year.

4. The cyclicality of flows

So far, we have been looking at the total flows. In this part, we will look at the cyclicality of the decomposed flows. First, Table 2 shows that separations are negatively correlated with changes in GDP and the coefficient of correlation for the whole period is -0.39. The level of these separations in a single year is between 26 and 33% with an absolute peak in 1987, 2 years after GDP growth peaks in 1985 (see Figure 1).

Table 2 further shows that it is important to distinguish between transitions from the private sector to a new job in the private sector where the coefficient of correlation is 0.21 and transitions from the private sector to the public sector where the correlation is –0.22. This observation indicates that the public sector absorbs individuals separating from the private sector during periods of recession and hence takes part in the economy as a stabilising factor.

Part of the explanation could be that the public sector provided the main part of the jobs for long-term unemployed, e.g. the job offer scheme of the active labour market policy program.[6]

Figure 1

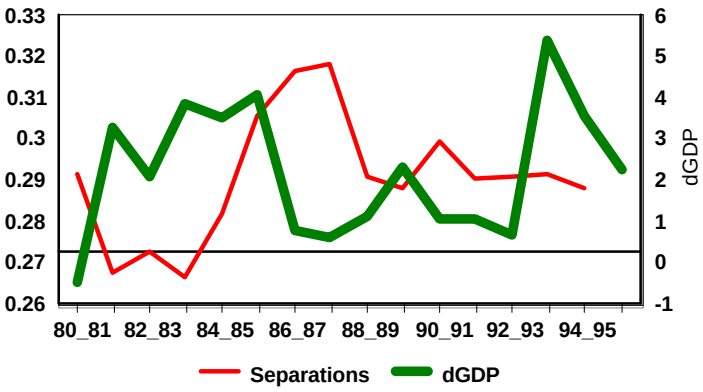


Table 2. Correlations with dGDP.

Correlations	Contemporaneous
Total Separations	-0.39
Same firm	-0.52
Private sector	0.21
Public sector	-0.22
No physical work place	0.11
Self-employed	-0.30
Unemployment	-0.64
Education	-0.31
Post employment wage	-0.13
Pension	-0.19
Out of labour force	-0.64

Note: Correlation between New Labour Market Programs and dGDP cannot be calculated because the programs started in 1994.

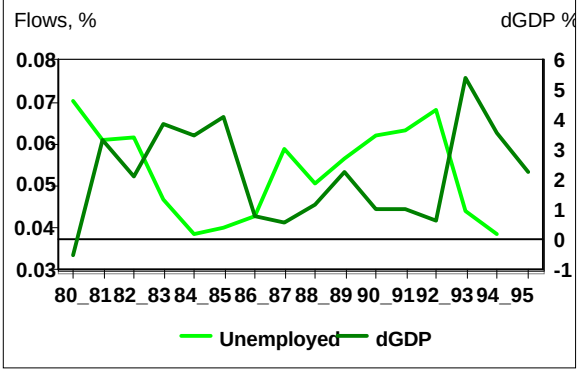
The category 'no physical workplace' contains people working as sales persons or consultants and using their private homes as base for their work though associated with a firm. This category is weakly pro-cyclical showing that the number of people who takes up this semi-self-employment is increasing in good times. Finally, individuals moving between workplaces within the same firm are found to be highly counter-cyclical.

[6] See Andersen et al. (2001) and Westergaard-Nielsen (2001).

Transition into self-employment (Figure 2) is negatively correlated with dGDP, which is counter-intuitive. A possible explanation of this correlation could be that people consider self-employment as an alternative to unemployment. A program providing a subsidy to all newly self-employed supported this counter cyclical flow and this program started in the mid-1980s lasting to the mid-1990s. The incentive structure may very well dominate the effects of the business cycle.

Figure 2
Separations into selfemployment

Figure 3
Separations into unemployment



For the job-to-unemployment separations the anti-cyclicality is highly pronounced, as seen in Figure 3. Here the correlation is –0.64. The years with low economic growth from 1987 to 1993 result in an increasing flow to unemployment. Only the strong growth in 1994 seems to be able to break the upward trend in the flow into unemployment. It is also plausible that the introduction of NLP in 1994 helped reducing the flow into unemployment. The development in 1995 suggests that NLP plays a role in redirecting the unemployed, since the two curves are positively correlated for the first time. In fact, Figure 4 shows that NLP "absorbed" 5% of all separations in 1994 and a little less in 1995. However, adding these numbers to the flow into unemployment does not explain the reduction in unemployment in 1994 and 1995 but it makes it less abrupt. Westergaard-Nielsen (2001) discusses the effects of NLP.

The relatively small number of people who leave employment to start an education is found to be clearly counter-cyclical (Figure 5). The anti-cyclical nature of the flows is supported by a correlation coefficient of -0.31. It is less likely that training and education schemes under various labour market policies are responsible for the anti-cyclicality because the general rule until NLP in 1994 was that a person should have been unemployed for 21 out of the last 24 months before he could be placed on a programme. Thus, the explanation of the anti-cyclicality is that the foregone earnings in a human capital function increase in periods with economic growth and decrease in slumps.

Figure 4
Separations into NLP

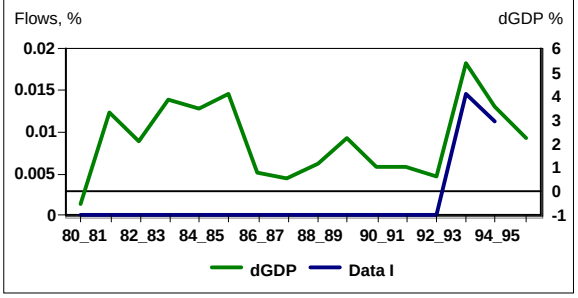
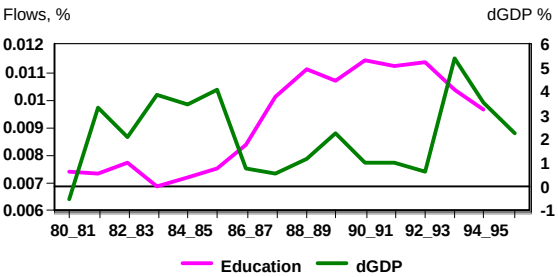


Figure 5
Separations into education



The flow into "Out of labour force" is also found to be clearly anti-cyclical according to Figure 6 with a correlation coefficient of –0.64. The strong cyclicality indicates that the economic situation is important to the decision whether to leave the workforce. A possible explanation is that if a person suffers from quick depreciation of human capital when unemployed, the knowledge about the business cycle may enforce the decision permanently to leave the workforce. Furthermore, individuals who plan to leave the workforce on a temporary basis, e.g. due to maternity leave, may plan to do so in slumps because the opportunity costs are lower in this period.

Figure 6
Separations out of labour force

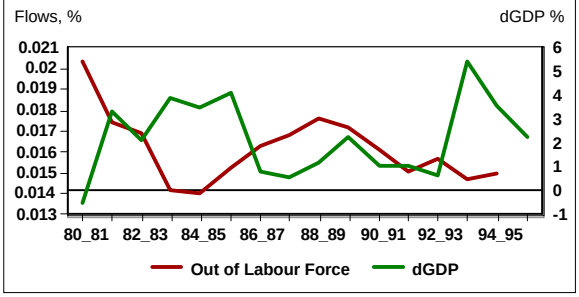
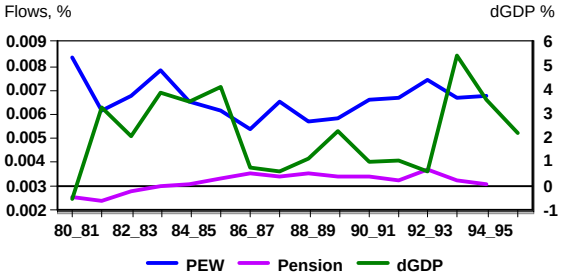


Figure 7
Separations into PEW and retirement



Transition into old-age retirement and disability-conditioned retirement (together called pension) appears to be vastly acyclical and to a large extent dominated by a reform in 1984 which allowed more people to get an early pension (Figure 7). And again in 1992, 1993 and 1994 a programme was introduced that allowed unemployed members of the UI system who were between 50 and 60 years of age to leave the labour market with a benefit slightly below the UI benefit. The flow into post employment wage (Figure 7) shows a moderate negative cyclical behaviour.

5. Individual flows and their determinants

In the following, the analysis is performed on an individual level investigating the determinants for the flows we have looked at in the first part of the paper. The intention is to answer the question whether a particular group of people are relatively more likely to end up in a particular destination state after a job separation.

The destination may indicate something about the reason for the separation, though all destinations could actually both be a result of an external push or a deliberate choice. Thus, a transition into education may happen as a result of a choice or because it is the best alternative to unemployment after a firing. A recent survey of Danish employers shows that the number of layoffs dominate the number of quits, Eriksson et al. (2000).

The flow from employment is modelled as the outcome of a probability model, where the person can either become employed at a new workplace, become unemployed, start as a self-employed etc. It is here natural to use the multinomial logit model. Due to computational reasons, the data used in the estimation are limited to a random sample of 10% of the total 6 million separations registered in the IDA database. The number of observations is still above 600,000, so it is believed that this limitation does not cost any loss of generality.

The choice of explanatory variables used in the multinomial regression is motivated by Anderson and Meyer (1994) who look at permanent and temporary separations using information on firms and the macroeconomic level and correct for individual fixed effects. They find that information about firms and the business cycle is important in explaining separations. Furthermore, they find that the results are robust when correcting for individual fixed effects. This is the main reason why explanatory variables on all three levels are included in the regression.

The results from the estimated multinomial logit model are shown in the Appendix. The interpretation of the regression results is not straightforward because of the normalisation of the estimated coefficients. For this reason, we apply the method of predictions to evaluate the model. The method requires a specification of the characteristics for the person of interest. Hence, we are constructing detailed stereotypes and predicting their transition probabilities.

5.1. The age effect

The probabilities of transitions to each destination state for individuals in different age groups are presented in Table 3. The reference person is low paid and working in a medium-size manufacturing workplace with constant employment and no macroeconomic growth. The predictions are made for men and women separately because the two genders are found to differ substantially in terms of observable characteristics.

Table 3: Probabilities of transitions to each destination state given standard characteristics.

	New em-ployment in private sector	Stay with the same firm	Public sector	No physical workplace	Self-employ-ment	Unemploy-ment	Education	PEW	Pension	Out of the labour force
Woman, Junior	.44	.03	.08	.02	.01	.32	.04	0	0	.05
Woman, Middle-aged	.39	.05	.06	.02	.03	.37	.01	0	.02	.07
Woman, Senior	.15	.03	.02	.01	.01	.33	0	.30	.07	.08
Man, Junior	.54	.04	.05	.04	.02	.24	.04	0	0	.03
Man, Middle-aged	.48	.06	.04	.03	.04	.28	.01	0	.02	.04
Man, Senior	.18	.04	.01	.01	.02	.24	0	.39	.06	.05

Note: Standard characteristics are: Employment in manufacturing, white collar, medium-sized firm, no employment change in workplace, high replacement ratio and no change in GDP.

There is a clear tendency for both men and women that senior workers given a separation from a workplace are less likely to become reemployed in the public or the private sectors relatively to younger workers. The transitions into unemployment (around 25% of all separations) are also at a relatively low level for senior workers. In fact, it is lower for the senior workers than for the group of middle-aged workers, indicating that the transitions from employment for the senior workers will mainly have destination states out of the labour market. Because the pure out of the labour force state is fairly constant over age groups, the important destination states for senior workers are post employment wage and pensions. These states are found to account for about 40% of all separations.

The picture for the youngest workers is different in many respects. First of all, the reemployment transitions are large and account for more than 50% of all separations in contrast to the senior workers where reemployment transitions accounted for only 25% of the separations. Education is the destination state that in particular makes the youngest workers different from the other age groups. Education accounts for around 7% of all transitions for young men and women.

In contrast to the two previous groups the middle-aged workers only make little use of the non-employment states. The only non-employment state of significant size is the out of labour force state (accounts for 10% of all separations). However, for women this is not different for the other age groups and for men only the youngest workers have a lower level of transitions into this state. For this reason, the middle-aged workers experience a larger level of transitions into unemployment, which is the only regular alternative to employment. In recent years, however, this picture is not as clear-cut, because the new labour market policy has become an option or an alternative to unemployment. The dominating group entering the new labour

market policy was found to be middle-aged women (result not shown) which in the present analysis is the group experiencing spells of unemployment most frequently.

6. Policy implications

We simulate a hypothetical structural policy, which directly changes the economic incentives of the agents by lowering the maximum level of unemployment benefits. The consequence of a reduction in the unemployment benefits is that both the replacement ratio and the benefits in PEW are reduced since the latter is compensated with UI related benefits. The coefficients from the multinomial logit are used to predict the transitions before and after the reduction and the elasticities for the policy change can be seen in Table 4.

Table 4. Elasticities for changes in transition probabilities calculated from policy simulations.

	GDP	Unemployment benefits
Same firm	-1.648	0.017
Private sector	2.574	0.065
Public sector	-3.018	-0.094
No physical workplace	2.675	-0.110
Self-employed	-0.904	0.222
Unemployment	-7.737	-0.156
Education	-6.124	-0.030
Post employment wage	0.136	-0.443
Pension	-1.737	0.384
Out of labour force	-4.372	0.127

The structural change makes it clearly less attractive to depend on any labour-market-related support and as a natural consequence of the policy transitions into unemployment and PEW are reduced. Another implication of the policy is that transitions into self-employment increase which can be explained by an opportunity cost argument. Maintaining an uncertain job career has become less attractive which will explain the increase in the transition into a pension scheme.

In a second simulation we investigate the impact of an exogenous shock, which increases the growth rate in the economy in a single year. The elasticity for unemployment is numerically larger in this simulation compared to the findings in the previous simulation. But before any conclusions are drawn, it is of great importance to take the time frame of the two policies into account. The structural change has a persistent effect on flows while the change in growth most likely will be of temporary nature.[7]

[7] This comment highly depends on the assumptions made in the underlying economic model.

The increased economic growth reduces the transitions into education and out of the labour force. Again, it may be an opportunity cost argument that drives the flow. Thus, higher growth has made it more costly to start education or leave the labour force. However, it is important to emphasise the temporary nature of the shock, which may affect the timing of e.g. education or maternity leave but not the decision.

The final step is to look at the conditions of the workplace from which the person is separating. We have categorized the workplace in the following four groups: workplaces expanding more than 10%, less than +/- 10%, contracting more than 10% or closing.

Rescuing closing firms has had a high priority in some countries and most often the reason has been a fear that workers laid off from closing companies had difficulties finding new employment. This policy had widespread support in Europe in the 1980s. Later it has been abandoned mostly because of the introduction of the single market in EU. However, some countries have practised huge placement and early retirement programs when big firms closed. Storrie (1993) describes how this policy has been followed in Sweden. One of his results is that people caught in one of the big plant closures on Swedish West Coast actually do much better than predicted. Since Denmark has never been very active in immediate assistance for displaced workers, it is highly interesting to see that somebody separating from a closing workplace is actually less likely to become unemployed than a person separating from an expanding or contracting firm (see Table 5). Our predictions evaluated for middle-aged men and women show that the probability of ending up in unemployment is 2/3 for a person being dismissed from a closing workplace compared to persons separating under other circumstances (.24 against .37 for women and .17 against .28 for men). This is rather remarkable because we know that those involved in a plant closure are all laid off while an unknown fraction of those separating from other workplaces are actually quitting. Part of the explanation is, however, closely related to signalling (Spence, 1973). The explanation is that plant closures dismiss highly profitable workers together with less profitable workers, while single lay-offs mostly affect less profitable workers. By profitable workers we mean workers where contribution to overall production is higher than wage costs. People who are involved in a plant closure will have an interest in signalling the circumstances, because they can use it as an advantage compared to the average worker not dismissed in a plant closure. Other workers do not have the same interest. Finally, another argument is that most workers in plant closures get a warning earlier than workers involved in singular lay-offs. Labour protection laws prescribe early notice in the case of mass dismissals, where single dismissals require no or short notice in Denmark, see Andersen et al. (2001).

Table 5: Probabilities of transitions to each destination state given standard characteristics but separating from firms with different employment statuses.

	New em-ployment in private sector	Stay with the same firm	Public sector	No physical workplace	Self-employ-ment	Unemploy-ment	Education	PEW	Pension	Out of the labour force
Woman, No change in employment	.39	.05	.06	.02	.03	.37	.01	0	.02	.07
Woman, Expanding workplace	.40	.08	.05	.02	.02	.35	.01	0	.01	.06
Woman, Contracting workplace	.41	.05	.06	.02	.02	.35	.01	0	.01	.07
Woman, Closing workplace	.46	.14	.04	.03	.02	.24	0	0	.01	.05
Man, No change in employment	.48	.06	.04	.03	.04	.28	.01	0	.02	.04
Man, Expanding workplace	.49	.11	.03	.03	.04	.26	.01	0	.01	.04
Man, Contracting workplace	.50	.06	.04	.03	.04	.26	.01	0	.01	.04
Man, Closing workplace	.52	.16	.03	.05	.04	.17	0	0	.01	.03

Note: Standard characteristics are: Middle-aged, employment in manufacturing, white collar, medium-sized firm, high replacement ratio and no change in GDP

The other sets of findings concern the probability getting re-employed in a new or in another plant owned by the same firm. For men leaving expanding and steady workplaces the re-employment probability is between 54 and 60%. For men leaving closing plants it is 68% and for contracting workplaces, it is somewhat lower. These numbers are lower for women, but there is the same difference between plant statuses. However, our results with respect to the probability of getting new employment in the private sector (column 1) show that the main reason for these differences is that employees from closing and contracting plants are more likely to get transferred to other parts of the same firm. Correcting for within firm transfers, people involved in plant closures are found to be only marginally better in getting new employment compared to other groups of people separating (4 percentage points for men and 7 percentage points for women). Thus, the seemingly better employment prospects for people involved in plant closures are largely due to a higher probability being transferred to other parts of the firm. However, unemployment is still lower for the group involved in plant closures, because they are less likely to drift to other statuses.

Another result is that those from plant closures are not more likely to become employed in the public sector, as would be the case if the public sector actively provided jobs for the unemployed, similar to what was the case in Sweden (Storrie, 1993).

7. Conclusion

In the first part of the paper, we study individual job-separations using the IDA database and account for the magnitude, persistence and cyclicality of flows. The findings in this section are in accordance with earlier findings and they emphasise the high level of separations taking place each year. The main finding is that one third of all separations is not followed by a new job.

To learn more about the nature of the separations, a multinomial logit is estimated. Individual characteristics such as age, gender and replacement ratio are included in the analysis together with the workplace characteristics of size and dynamic behaviour. Also the business cycle effects are taken into account by including dGDP in the regression. We find that variables of all 3 classes are important in explaining the individual behaviour.

In a policy section, we look at the effect of different policies on the transitions into employment and non-employment states. We show that structural policies lowering the replacement ratio of UI and growth policies have different implications for the economy but both reduce the transitions into unemployment. General policy interventions with the purpose to prevent firm closures are argued to be inefficient because individuals separating from a closing firm are slightly less vulnerable than individuals separating under other circumstances. We do not rule out that targeted programs may be effective.

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Appendix

Multinominal logits for flows out of employment.

	Stay with the same firm[1)]	Public sector	No physical workplace	Self-employment	Unemploy-ment
Woman (= 1)	-0.440	0.610	-0.304	-0.335	0.488
	(0.010)	(0.012)	(0.020)	(0.018)	(0.008)
Age 18-30	-	-	-	-	-
Age 31-50	0.4276	-0.087	-0.189	1.077	0.254
	(0.010)	(0.012)	(0.020)	(0.017)	(0.008)
Age 51-	0.919	-0.227	-0.019	1.284	1.082
	(0.015)	(0.012)	(0.036)	(0.025)	(0.012)
Replacement ratio[2)] 70-90%	-	-	-	-	-
Replacement ratio 50-70%	0.207	-0.410	-0.638	-0.156	-0.026
	(0.011)	(0.013)	(0.022)	(0.019)	(0.008)
Replacement ratio <50%	0.148	-0.642	-0.882	0.018	-0.292
	(0.013)	(0.017)	(0.026)	(0.019)	(0.011)
Firm size < 20	-1.504	-0.300	-0.923	0.785	-0.054
	(0.016)	(0.023)	(0.032)	(0.037)	(0.016)
Firm size 20-99	-0.852	-0.340	-0.666	0.109	-0.198
	(0.015)	(0.023)	(0.032)	(0.038)	(0.016)
Firm size 100-499	-0.400	-0.213	-0.349	-0.054	-0.117
	(0.016)	(0.024)	(0.034)	(0.040)	(0.016)
Firm size > 500	-	-	-	-	-
Reducing workplace	0.575	0.201	-0.046	-0.173	0.088
	(0.011)	(0.013)	(0.021)	(0.018)	(0.009)
Expanding workplace	-0.039	-0.075	0.051	-0.119	-0.102
	(0.016)	(0.016)	(0.026)	(0.022)	(0.011)
Closing workplace	0.933	0.580	0.439	-0.279	-0.585
	(0.013)	(0.019)	(0.025)	(0.022)	(0.012)
No change in employment	-	-	-	-	-
.dGDP	-0.042	-0.058	-0.001	-0.039	-0.111
	(0.003)	(0.003)	(0.005)	(0.004)	(0.002)
Occupation dummies	Yes	Yes	Yes	Yes	Yes
Sector dummies	Yes	Yes	Yes	Yes	Yes

Note: Standard errors are in parentheses. The reference category is stay in private sector. A replacement ratio category consisting of individuals with no previous wage e.g. young individuals is not presented. Number of observations is 616745 and the Pseudo R2 is 0.1277

[1)] Individuals in this category have the same employer but a different physical workplace.

[2)] In the calculation of the replacement ratio, we have ignored the unemployment insurance degree i.e. full-time, part-time or no insurance.

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Multinominal logits for flows out of employment (continued)

	Education	PEW	Pension	Out of the labour force	New Labour Policy
Woman (= 1)	0.180 (0.017)	-0.112 (0.026)	0.214 (0.032)	0.676 (0.013)	1.724 (0.044)
Age 18-30	-	-	-	-	-
Age 31-50	-1.974 (0.035)	20.717 (-----)	2.945 (0.063)	0.439 (0.014)	0.327 (0.037)
Age 51-	-4.400 (0.250)	28.646 (0.177)	5.379 (0.062)	1.534 (0.018)	-0.291 (0.086)
Replacement ratio[1)] 70-90%	-	-	-	-	-
Replacement ratio 50-70%	-0.793 (0.022)	0.086 (0.025)	-0.843 (0.035)	-0.377 (0.015)	0.530 (0.040)
Replacement ratio <50%	-0.950 (0.029)	-0.528 (0.030)	-0.430 (0.035)	-0.273 (0.017)	0.280 (0.051)
Firm size < 20	-0.567 (0.031)	-0.670 (0.036)	-0.321 (0.049)	-0.241 (0.024)	-0.404 (0.070)
Firm size 20-99	-0.514 (0.032)	-0.609 (0.034)	-0.521 (0.050)	-0.392 (0.024)	-0.386 (0.069)
Firm size 100-499	-0.227 (0.034)	-0.420 (0.034)	-0.387 (0.052)	-0.254 (0.026)	-0.142 (0.070)
Firm size > 500	-	-	-	-	-
Reducing workplace	0.071 (0.019)	-0.837 (0.024)	-0.434 (0.031)	-0.192 (0.014)	-0.267 (0.041)
Expanding workplace	-0.035 (0.023)	-0.176 (0.031)	-0.153 (0.040)	-0.084 (0.018)	-0.013 (0.047)
Closing workplace	-0.346 (0.028)	-1.762 (0.041)	-0.861 (0.043)	-0.446 (0.020)	-1.02 (0.073)
No change in employment	-	-	-	-	-
.dGDP	-0.096 (0.005)	-0.043 (0.006)	-0.059 (0.008)	-0.076 (0.004)	1.10 (0.015)
Occupation dummies	Yes	Yes-	Yes	Yes	Yes
Sector dummies	Yes	Yes	Yes	Yes	Yes

Note: Standard errors are in parentheses. The reference category is stay in private sector.
[1)] In the calculation of the replacement ratio, we have ignored the unemployment insurance degree i.e. full-time, part-time or no insurance.